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Chest Complications in Abdominal Disease: a Study in Diagnosis

The First Hunterian Lecture of the Hunterian Society
Session 1901-2

BY

J. MITCHELL BRUCE, M.A., LL.D., M.D., F.R.C.P.

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Consulting Physician to the Hospital for Consumption and Diseases of the Chest, Brompton

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Chest Complications in Abdominal Disease: a Study in Diagnosis

Mr. President and Gentlemen,—I confess that I feel myself quite unworthy of the honour that you have conferred upon me by asking me to deliver the first lecture of the present session, and thus to associate myself with a society which bears the name of my immortal countryman, John Hunter. My single comfort is that what I am about to lay before you is the outcome of honest observation in the field of clinical medicine, and that, however poor it may be, it has been inspired by his example and his teaching; and, unless I am mistaken as to the constitution and objects of the Hunterian Society, my address will not be less favourably received because it is practical in its bearings. To some of you, perhaps, the thought may have occurred, when you read its title, that the subject relates to uncommon or even rare conditions, and that there would be little for you to carry back with you that might be of real use in daily practice. I hope I may be able to persuade you that this is not so, and that the considerations which we shall reach are of almost daily application in our routine work. In order to ensure this very desirable end, I have been compelled to omit a portion of my subject which would have served as a natural introduction to a study of the clinical aspects of complications within the chest in abdominal disease, namely, the anatomical and physiological relations to each other of the viscera above and below the diaphragm and of the diaphragm itself. This is not a systematic lecture, and I know that I can safely assume that you are familiar with these points.

Associated diseases of the abdomen and chest present

themselves clinically from either of two sides. More frequently we meet with them as affections of the stomach, bowels, liver, or other of the intraperitoneal viscera, or of the peritoneum itself, complicated with a secondary invasion of the chest; in other instances, we are first introduced to a disease of the lungs, pleura or pericardium, which proves to be secondary to an unrecognised lesion below the diaphragm. It will give more effect to the lessons which I wish to draw from our study of the subject if I discuss it in the same order, that is, first from the one side and then from the other. And in so doing I shall be careful to make my sketches of my most interesting cases so broad as neither to weary you nor to obscure with details the points which I wish to bring into special prominence.

I.

In the course of the investigation of an obscure case of abdominal disease, when we are in difficulty over the diagnosis and hesitating in our treatment, symptoms and signs make their appearance which point to invasion of the chest. These at first add to the complexity of the case; but if they are attentively considered, they prove to be useful guides to the discovery of its nature and to the correct treatment, when treatment is possible. Let me begin with what would now be called a very simple instance.

Subdiaphragmatic Abscess

A good many years ago I had under my care at Charing Cross Hospital a middle-aged, unmarried woman, who gave us a complicated history of chronic disease or disorder of the stomach, ending in an attack of violent abdominal pain, vomiting and collapse immediately before her admission. The most probable diagnosis was perigastritis from incomplete perforation of the stomach; and as this suggested surgical interference, I availed myself of the advice and assistance of my colleague, Mr. Morgan. Now in those early days we had very little experience of subdiaphragmatic abscess and its surgical treatment to guide us. Had suppuration occurred, and, if so, where did the pus lie and how was it to be reached? An area of fulness and tenderness developed at the outer border of the left rectus abdominis muscle, a little above the um-

bilical level, as if matter were pointing immediately underneath; but it passed off again, leaving us once more in doubt with respect both to the pathological condition and the proper treatment to pursue. Almost immediately however, a simple patch of dulness appeared at the posterior base of the left chest. It increased daily in size, and presently it yielded the ordinary signs of pleurisy with effusion. From that moment the diagnosis was easy. There was suppuration, or at any rate active inflammation, under the left wing of the diaphragm; and I may add that pus was found in this situation at the operation which followed. I can understand how the history of this case as I have recounted it may sound very commonplace to you to-night, one, indeed, hardly worthy of record or even reference. We see almost daily in hospitals, and by no means rarely in general practice, cases of a similar kind, or closely related, which are readily diagnosed and unhesitatingly and successfully treated by the surgeon. This, however, is beside the point, which is that at a time when perforation of the stomach was quite unfamiliar to us as a condition amenable to operation, and very imperfectly understood clinically, the phenomena at the base of the chest revealed its existence, progress, and local development after the abdominal phenomena had failed us. So even now, with all our improved knowledge of perigastric abscess, careful observation of a similar kind will surely be of service.

Tuberculous Peritonitis

Now take another illustrative case. A medical student, aged 24, consulted me for distension and tenderness of the abdomen, accompanied by fever. He had lived in India as a child, and from the age of 6 had suffered from occasional attacks of malarial fever and dysentery. I found considerable abdominal enlargement and the signs of free fluid in the peritoneal cavity; the temperature was 103 degrees. I confess I could not reach a definite diagnosis but I suspected that along with malarial fever there was chronic hepatitis, the liver not being palpable in consequence of the ascites. For a short time I remained in doubt. Then an event occurred which gave an entirely different complexion to the whole case. It was a simple enough event in itself: the appearance of friction over the base of the left lung, which was quickly followed by the development of crepitations upwards. This was enough.

The case was one of tuberculosis, involving first the peritoneum, then the left pleura and lung. In a very few weeks it ended fatally.

Appendicitis

Tuberculous peritonitis is not the only kind of peritonitis that may be associated with acute pleurisy and other complications within the chest. The commonest by far is perityphilitis, originating in appendicitis. I have met with a number of instances, some of which may interest you, and certainly deserve record, for different features that they presented of diagnostic or therapeutical importance. Consider for a moment the significance of the following case. I was asked to see a man of 40 who was under treatment for appendicitis. The disease had passed through what might be called the ordinary course of an acute attack of moderate severity, and so far everything had gone well—with one exception. This was persistence of fever. The local symptoms and signs had died down, and yet the patient's temperature remained pyrexial. I examined the abdomen carefully, and confirmed the correctness of the account that had been given me. Nor were there any evidences to be discovered of pus tracking upwards or downwards. There was no septicæmia. I was beginning to feel puzzled, when systematic examination of the chest cleared up the difficulty, for at the base of the right lung I found physical signs of a patch of pleuro-pneumonia. Now, to some of you it may appear remarkable that whilst the lung and pleura were actively involved in what must be regarded as a process of local infection, the source of the infection itself—that is, the primary disease—should have been perfectly quiescent. Unquestionably this is a point that deserves consideration. There can be no question of the facts. Indeed, I will go further and say that the chest is sometimes invaded in perityphlitis after successful treatment of the primary disease, including removal of the appendix. Some time ago I saw in consultation a young man of 24, who was suffering from acute pleuro-pneumonia at the base of the right chest. Three weeks previously he had been operated on for purulent perityphlitis with excellent result; indeed the local wound was perfectly healed, as the surgeon demonstrated to me. I learned that the fresh development had started only some thirty hours before my visit, with pains in the left

hypochondrium, which presently shifted to the right subaxilla. There the pain persisted, quite slight in degree, but aggravated by deep inspiration. With these symptoms the temperature, which was being carefully observed and recorded by the nurse, rose to a moderate height, and the ordinary constitutional phenomena of fever developed. Having confirmed the physical signs of invasion of the right pleural cavity, I searched the abdomen for evidences that might exist of continuity of the processes in the abdomen and chest, but there were none to be found. The whole abdomen was perfectly soft and free from tenderness, nor could any abnormal sign be elicited in the loin. It was resolved to give nothing more than a dose of calomel, followed by a saline. The result was entirely satisfactory. Next day the temperature had returned to normal, and the patient was much better in every respect, although naturally the physical signs in the chest remained. When I saw the patient for the third and last time, six days later, only a small patch of impaired resonance over the lower ribs could be found, and he was practically well.

Unfortunately the secondary affection within the chest in appendicitis is not always of that moderate degree and favourable course which these two cases illustrate. In some instances severe inflammation occurs, characterised by a large serous effusion in the right pleural cavity. I found this association, for instance, in a middle-aged man, the subject of purulent perityphlitis, which required immediate operation, the primary disease having commenced fifteen days before, and the pleurisy seven days. Evacuation of the intraperitoneal abscess was sufficient to relieve both conditions. But you all know that the termination of cases of this class is not favourable in every instance, or, if favourable, by no means so easy or uneventful. I have met with a series of instances of purulent invasion of the right chest associated with appendicitis. In some of the cases operation had been neglected, in other cases it had been successfully completed. Such an empyema may extend over months, and gravely compromise the prospects of recovery. Or right pleuro-pneumonia may be found lying over a sub-diaphragmatic abscess which connects it with the diseased area around the appendix. I have known both pleural cavities invaded under similar circumstances—a hopeless complication,

Another form is equally alarming, although fortunately,

not necessarily fatal. I mean the development of an abscess cavity at the base of the right chest, and rupture of it into the bronchi with discharges of quantities of foul pus. Few conditions of the class which we are now considering could be more distressing or appear more desperate than this. The patient, with a recent surgical wound in the right iliac fossa which is still being drained, is compelled to sit up or to be raised in bed on account of violent paroxysms of cough, accompanied with discharge of mouthfuls of offensive sputum, and followed by alarming dyspnœa and collapse. Yet, as I have said, even from this unpromising condition he may be rescued by perseverance in strict surgical and constitutional treatment. Thus, in a case that I have in my mind as I attempt to describe this grave type of chest disease in appendicitis, which I saw in consultation with Dr. Rushworth, of Hampstead, and in which we had the invaluable surgical assistance of Professor Barker, not only all symptoms but practically all the physical signs of pulmonary abscess disappeared within six weeks. Only a trace of dulness and occasional crackling over the right lower lobe remained to point to the seat of cavernous breathing and bubbling *râles* which accompanied the acute phase of the process. I need hardly remind you, however, that there are other and even more unpromising, indeed quite hopeless, intrathoracic complications of purulent perityphlitis, including septic endocarditis, in which the line of infection can be traced back through the liver (pyæmic abscess) and portal vein (pylephlebitis) to the appendix.

If it may appear to some of you that I have said enough, or more than enough, on the subject of the association of disease within the chest, in one form or other, with perityphlitis, I can but reply that the time which I have devoted to it in this lecture is strictly proportionate to its frequency in my own experience. I should call it by no means an uncommon event, and at the same time one which in routine practice not seldom remains for a time unrecognised, probably because of the considerable distance of the two seats of disease from each other.

Affections of the Chest Secondary to Hepatic Disease

This brings me to speak of a more obvious, because more immediate or continuous as well as familiar, association of abdominal and intrathoracic disease. I refer to

secondary affections of the right pleura and lung in abscess of the liver, inflammatory affections of the gall bladder and bile ducts, and other morbid conditions of these viscera. Tropical abscess is by no means a common disease in this country, yet there can be but few of us here this evening who have not met with it in practice, and many of us must have seen at least one instance of hepatic abscess bursting through the lung. It is the right chest that is invaded as a rule; and the physical signs, not only at the base but occasionally at least well upwards into the pulmonary region, can be easily traced. Only a few days ago I met with an instance of invasion of the left pleura in this connection. A young man who had suffered from dysentery and hepatitis in Burmah was found to have a large swelling in the epigastrium, and the lower sternal region pitted on pressure. The most urgent condition, however, of quite recent development, was dry pleurisy of the left side, characterised by pain and loud friction sound all over the anterior and lateral base. Two days later a large hepatic abscess was safely evacuated.

I will not dwell longer on this class of cases, which, as I have said, are comparatively common, very obvious and readily recognised. Nor will I do more than make a passing reference to the occasional occurrence of right pleurisy in gall stones and their local effects on the neighbouring parts. This association is met with not only as an acute complication of the presence and passage of gall stones, that is, as acute right pleurisy following on hepatic colic, but also as a chronic process involving the base of the right chest and the right hypochondrium, where the signs may be extremely complex and difficult to interpret.

We have now reviewed a sufficient number of cases belonging to the first of the two classes which I proposed to examine, to justify us in formulating a practical conclusion. I would do so in these terms: In all obscure diseases within the abdomen, particularly diseases of an inflammatory kind, let it be a clinical rule to examine the chest with special care. I fancy I hear some of you saying to yourselves, "Of course this is a clinical rule, recognised, taught, and followed." With all respect I would ask, Do we follow this rule on all occasions, or even as a matter of ordinary clinical routine? I confess I am somewhat doubtful. And now I would go further and give you as a corollary the further counsel; Let such physical examina-

tion of the base of the chest in obscure and anxious abdominal cases be repeated as often as examination of the abdomen itself, daily if necessary, for it is an essential feature of the association that it supervenes in the course of the primary disease, and develops under our observation.

II.

The second set of circumstances in which the association of abdominal and thoracic disease presents itself to us clinically, whilst perhaps less frequent than that which I have just reviewed, is quite as important, and in one way even more interesting. It is, as it were, the reverse presentment of the related diseases. In the course of the investigation of a case of disease of the chest, such as a pleurisy or a basic cavity, we discover evidence of disease within the abdomen. This observation appears at first to add to the difficulty of diagnosis, but it serves to simplify it. The disease below the diaphragm proves to be the primary of the two, and the nature and course of the case from first to last, as well as the indications for treatment, are cleared up. I have met with many instances of this relation of intrathoracic and abdominal disease diagnostically, and I will now relate to you very briefly a few of the most instructive of them.

Hepatic Disease

A single lady, aged 40, who was described as a chronic dyspeptic, consulted her medical attendant for pain in the right hypochondrium. He found the physical signs of a considerable effusion in the pleural cavity, and asked me to see the case with him in consultation with a view to treatment. His diagnosis was easily confirmed. There was dulness over the right base, anteriorily as high as the nipple line, posteriorily above the scapular apex; and the auscultatory signs corresponding were characteristic of fluid. The side was tender, suggesting empyema; but it had been rather freely painted with iodine to promote absorption of the exudation.

Now, I hardly need remind you that we must never rest content with the diagnosis "pleurisy" in any case that may come under our observation and care. "Pleurisy" is nothing more than an anatomical expression—inflamma-

tion of the pleura. It is quite incomplete and insufficient as a working diagnosis. By itself it will not carry the weight of any useful prognosis or line of treatment that we might attempt to base upon it. You will agree with me that we can neither say whether a patient will live or will die, nor order treatment for him likely to be of any service, if we diagnose that he has "sore throat," and go no farther. The most inexperienced and the most casual of us takes another step in his enquiry, and determines whether the sore throat be scarlatinal, or diphtherial, or syphilitic, or rheumatic, or gouty, or the result of a recent operation on the tonsils, or whatever else it may be. Is the same proper course of enquiry followed in every case of inflammation of the pleura? Or does not the term "pleurisy" sound so complete and sufficient, based as it is, also, on the result of an elaborate examination of the chest, that the practitioner rests satisfied with it, and thereupon proceeds to plan his treatment? I am afraid this is sometimes done, and no attempt made to determine the nature, kind or origin of the pleurisy: whether tuberculous, rheumatic, scarlatinal, influenzal, malignant, related to nephritis, septic, or produced by one or other of the micro-organisms which are now known to produce it. Now to return to the case which I was reciting to you. When the diagnosis of right pleurisy with effusion was confirmed, my friend and I tried to connect it with one or other of these causes, but in vain. Our investigation had to be carried further, and naturally it was carried into the abdomen. And there the cause was found at once. The liver was the seat of an extensive growth, quite obviously malignant. The effusion in the right pleural cavity proved to be an insignificant event in the course of a disease which would end fatally in a few weeks.

Pleurisy and Perigastric Abscess

Next let me tell you of a case of what appeared at first to be nothing more than a simple serous pleurisy involving the other side of the chest. A delicate-looking girl of 18, who had been taken with severe pain in the left subaxilla, was found after some days to have dulness over the whole of the corresponding lung, loss of fremitus, weak bronchial breath sounds, and ægophony. She suffered from severe dyspnœa on movement; and her case being in this respect and otherwise urgent, she was admitted into the Brompton

Hospital. The resident medical officer confirmed the diagnosis, found pus by means of a long fine needle, and sent for Mr. Godlee. The rest of the case has been recorded by Mr. Godlee himself. The preliminary exploration made by him revealed the presence of serum, not pus, in the left chest; he diagnosed pus within the abdomen; and, by adopting a carefully-planned method of operation, evacuated a perigastric abscess lying below the diaphragm, and a large serous effusion lying in the pleural cavity above it. The girl recovered, after an unusually eventful history, from what was at first called "simple pleurisy with effusion."

Pleurisy and Perinephritis

Very curiously, I have met with an exact counterpart of this case as regards the possible fallacies, difficulties and dangers connected with diagnosis, but on the right side of the chest instead of the left. A gentleman of 45 was seized with urgent symptoms of right pleurisy, and the physical signs of fluid in the chest were easily made out. He was exceedingly ill when I saw him in consultation on the third day. Along with the account of pleurisy there was a curious and perplexing history of abdominal pain and of urinary disturbance. Examination of the right lumbar region elicited tenderness, and the urine proved to contain blood and much albumen. Perinephritis and associated pleurisy were diagnosed; and we arranged to get the help of a surgeon. Before doing so, however, my friend wished to confirm the diagnosis, and passed a needle into the lower part of the right side. Pus was found and empyema was diagnosed. Next day an exploratory operation was performed. The right pleural cavity contained abundant fluid, but this was serous, not purulent; and underneath the right wing of the diaphragm in the region of the kidney was a collection of extremely offensive matter. Unfortunately the case did badly.

I could easily multiply descriptions of cases of this kind which I have met with from time to time, and in which the order of discovery has been, first, that of acute disease within the chest, whether pleuritic or pulmonary or both, and thereafter that of abdominal disease, which proved to have been the primary lesion. Thus I have known the diagnosis of hydatid of the liver preceded for months by the discovery of a band of soft crepitus round the base of

the right chest, that is, along the line of attachment of the diaphragm, for which we could not account. When the tumour developed with its characteristic signs in the hypochondrium there was no difficulty. But I must pass on to equally instructive experiences of a related but different kind.

Pleurisy and Peritonitis (Tuberculous)

The first of these is the case of a man, aged 40, who came of delicate stock, and had himself long been weakly, thin and anæmic. Quite recently he had become manifestly unwell, and been compelled to give up work, when it was found that he was feverish and had a patch of pleurisy at the base of the right chest. He grew steadily worse, and had to keep his bed; yet there was nothing of an obvious character to account for this, the basic signs being by no means extensive. His condition was then investigated with particular care, and it was discovered that in addition to the chest disease there was a small quantity of fluid in the peritoneal cavity. The diagnosis now became clear—the man had active tuberculosis; and I may add that he died of this in a few weeks. This case will remind you of that other instance of associated tuberculosis of the abdomen and chest which I related to you in the first part of my lecture. Only the order of discovery and diagnosis is reversed in the two histories. In the one, what was believed to be ascites from hepatic disease was proved to be tuberculous peritonitis by the discovery of associated disease above the diaphragm; in the other, an insignificant-looking affection of the pleura was proved to be tuberculosis by the discovery of associated disease in the abdomen.

Hydatid of the Liver

Leaving for a moment physical signs, I need hardly remind you that symptoms connected with the lungs are frequently the first phenomena to direct our attention to the abdomen. How instructive, for example, is the following case: I was consulted by a stout but soft-looking man of middle age for what he called blood spitting and pain under the right breast. It was an easy matter to discover impairment of respiratory movement and of percussion resonance, as well as a few small crepitant sounds, over the right lower lobe, back and front, but I failed to find a satis-

factory explanation either of the chronic pleurisy or of the hæmorrhagic sputum. I therefore extended my observations in two directions. I made an ordinary microscopical examination of a specimen of the sputum which the patient coughed up for me, and in it, after a little search, I found a single hydatid hooklet. At the same time physical examination of the hypochondrium readily revealed the presence of hydatid tumour of the liver. This, however, was not the end of the diagnosis of the case, to which I shall return presently to show how it was incomplete after all, and the result correspondingly unsatisfactory, from want of sufficient care in the study of the very symptom, namely hæmorrhagic expectoration, which had proved so suggestive to me. Meanwhile, let me say that the sudden discharge of pus, bile, hydatid membranes, and the like, by cough and expectoration, may come under our observation at any time as the first symptom or event that compels the patient to seek advice for disease of the liver or other abdominal organ.

I have now related a sufficient number of this series of cases to make the clinical bearing of them obvious; and I may venture to state it in the form of a second clinical rule for your acceptance, as I did the conclusion at which we arrived from a study of my first series. Let it be a rule of practice in every instance of pleurisy and pulmonary disease, or of difficulty in connection with the interpretation of pulmonary symptoms, particularly at the base of the chest, to complete our examination with a careful enquiry into the condition of the stomach, the liver, the intestines, the other abdominal viscera, and the peritoneum itself, remembering that affections of the chest often originate below the diaphragm. I would particularly ask you to observe that the risk of your failing to follow this second rule is greater than the probability of your neglecting the first. As a matter of fact it is not generally observed. Examination of the abdomen is not a routine procedure when the patient's complaints relate to the chest, especially if the patient be a woman. But as I have already said, there is usually another reason for this oversight when we commit it, namely, that we rest content with the diagnosis "pleurisy," "cavity," "hæmoptysis," or the like, which, however elaborate it may sound, is nothing more than a first step towards a working acquaintance with the case. And as the risk of omission is con-

siderable, so also the discredit that may follow it is serious. It is very unfortunate to call by the name of "pleurisy" a grave abdominal disease like perigastric abscess, or tuberculous peritonitis, or cancer of the liver.

III.

Difficulties in Diagnosis

I have spoken so fully on the association of diseases of the abdomen and chest, and raised it to a position of such importance by taking it as the subject of the Hunterian Lecture, that I fear lest I may have gone too far and be responsible for your discovery of it in cases where it does not exist. This is a mistake which is easily made. A good many other conditions simulate very closely that which we have been considering this evening. Let me mention a few of the commonest of them.

In the first place, invasion of the pleura and lung from the abdomen is simulated by secondary affections of the same parts in puerperal septicæmia originating in the pelvis. I need not do more than mention this serious condition, which occasions so much anxiety when it occurs in your midwifery practice. No doubt its pathology varies considerably in different instances, but certainly in cases that I have recently seen the infection reached the chest through the blood stream, not *viâ* the lymphatics of the peritoneum and diaphragm. This reminds me of a mistake that I once made in the diagnosis of a case of pleurisy following a pelvic operation. A single woman of 35 had a papillomatous mass removed from the neighbourhood of the uterus by combined suprapubic and intravaginal operation. All went well for a few days, but then the temperature rose, vomiting set in, and empyema developed in the right side of the chest. In spite of the fact that there was not a trace of peritonitis, I maintained that the relation of operation and empyema was too obvious to be ignored. But I was wrong. The case recovered after incision and drainage; there was no septicæmia; and the empyema was proved to be influenzal, for it turned out that the patient's sister had come and sat by her bedside straight from that of a friend with influenza.

The second error in diagnosis that might be made by one somewhat over-zealous to discover an instance of the connection which we are discussing, consists in inter-

preting every patch of dulness and crepitus at the base of the chest as significant of invasion of the lung or pleura. We must not forget that in great enlargements of the liver an area yielding these signs may be due to compression and displcement upwards of the lower lobe of the right lung; and that the same parts may be hypostatically congested and œdematous, if the patient has been confined to bed for some time. Nor are the symptoms always so free from possible fallacies that mistakes may not occur unless scrupulous care be exercised in the investigation of them. I promised a few minutes ago to return to this point in connection with the case of hydatid of the liver and hæmorrhagic sputum which I described to you. You will remember that I found a hydatid hooklet in the sputum, and the ordinary physical signs of hydatid of the liver. Now the hydatid of the liver, which was a very large one, was treated surgically but unsuccessfully, for the patient died, and then we discovered that the blood-stained sputa had not come from the hydatid of the liver at all, but from a second hydatid at the base of the right lung. If I had examined the blood-stained products more carefully, I should have been able to determine that they contained neither bile nor hepatic tissue.

Lastly, it is very often difficult, and sometimes impossible, to make a differential diagnosis of the seat of the primary lesion in the abdomen which has invaded the chest, that is to say, whether it is in or around the stomach, the bowel, the liver, the kidney, or one of the other viscera. But this is a part of the subject into which you will not expect me to enter now.

In conclusion, and, as it were, by way of postscript, let me notice two other points of interest indirectly connected with our present subject. The first is a pathological one. We have had before us to-night many instances of the passage of infective materials from the abdomen into the pleura. May not this be the usual route by which the pleura is invaded by the tubercle bacillus? We all know how extremely common tuberculous pleurisy is, and how, as a rule, it precedes the pulmonary disease by months or by years. In the face of what we have been studying this evening, is it not likely that the bacillus often reaches the pleura in the lymphatic stream through the diaphragm from the peritoneal cavity with its many visceral relations?

The second point is a strictly practical one. Indeed, so thoroughly practical and important is it that this must

serve as my excuse for introducing it into a subject to which it does not strictly belong. I refer to the condition of the abdomen in acute disease within the chest, particularly acute bronchitis and acute pneumonia. Distension of the stomach is a very common condition in these diseases, partly produced by free feeding with fluid diet. Intestinal distension is frequently associated with diarrhœa in acute pneumonia. In both cases the diaphragm is driven and kept forcibly upwards against the lungs and heart; respiration and circulation are grievously handicapped; and the patient may perish in consequence of an adventitious embarrassment which is preventable or remediable. Might I venture, then, to submit to you a third rule of practice? Never neglect to examine with particular care the state of the abdomen with respect to distension and pressure in every case of acute pulmonary disease.